West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-04100013-2012**
Application Received: **July 27, 2011**
Plant Identification Number: **03-54-04100013**
Permittee: **Dominion Transmission, Inc**
Facility Name: **Lightburn Station**
Mailing Address**: 445 West Main Street**
Clarksburg, WV 26301

Physical Location:	Jane Lew, Lewis County, West Virginia
UTM Coordinates:	547.54 km Easting • 4331.11 km Northing • Zone 17
Directions:	From Charleston take I-79N to Jane Lew. Take Exit 105 (Jane Lew Exit) and make a left on County Road 7 (Berkin-Jane Lew Road). Stay on CR-7 until it intersects Route 19 (Main Avenue). Make a right on Route 19 and make the immediate left on Broad Run Road. Stay on Broad Run Road until it intersects County Road 1 (Old Mill Road/Fork River Road/Jacksons Mill Road) and make a right. Stay on CR 1 for about 500 yards and Lightburn Station is on the right.

Facility Description

The Lightburn Station consists of a natural gas extraction plant, Lightburn Extraction Plant (LEP), and a compressor station, Lightburn Compressor Station (LCS). LEP is located adjacent to LCS. The LEP and LCS are located on contiguous property and will be under control of the same person. However, the plants do not belong to the same industrial grouping (SIC). The LCS operates under SIC Code 4922 (Pipeline Transmission of Natural Gas), and the LEP operates under SIC Code 1321 (Natural Gas Liquid Extraction).

The emission units at LCS consist of two (2) 2000 HP natural gas fired reciprocating engines (EN01, EN02), three (3) 4000 HP natural gas fired reciprocating engines (EN03, EN04, EN05), two (2) 6060 HP natural gas fired reciprocating engines (EN06 (6), EN07 (7)), (1) 1085 HP auxiliary generator (AUX02 (11)), two (2) dehydration unit stills (DEHY01, DEHY02), two (2) boilers (BLR01, BLR02 (14)), one (1) heater (HTR01), two (2) reboilers (RBR01, RBR02), and two (2) dehydration unit flares (DEHY1, DEHY2).

The emission units at LEP consist of two (2) 3550 HP natural gas fired reciprocating engines (EN08, EN09), two (2) 259 HP fire pump engines (EN10, EN11), four (4) 60,000-gallon aboveground natural gas liquid storage tanks (008-01, 008-02, 008-03, 008-04), two (2) natural gas liquid loading racks (009-01, 009-02), one (1) emergency and maintenance flare (FLARE3), one (1) 500-gallon aboveground methanol storage tank (014-03), two (2) 290-gallon aboveground diesel fuel storage tanks (014-01, 014-02), and one (1) 254 HP emergency generator (012-01). The natural gas capacity of the LEP is 44 MMSCFD, and the plant is estimated to produce 1,916 barrels/day of natural gas liquids. The LEP Plant receives natural gas from the existing Kennedy Compressor Station and Wymer Junction.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2011 Actual Emissions
Carbon Monoxide (CO)	1085.46	193.65
Nitrogen Oxides (NO_X)	2495.81	213.31
Particulate Matter (PM_{10})	12.57	2.46
Total Particulate Matter (TSP)	12.57	2.13
Sulfur Dioxide (SO_2)	0.80	0.14
Volatile Organic Compounds (VOC)	567.77	83.50

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2011 Actual Emissions
Formaldehyde	51.05	10.83
Acrolein	7.38	1.29
Acetaldehyde	8.19	1.28
Benzene	7.82	0.48
Ethylbenzene	0.09	0.02
Hexane	2.03	0.29
Toluene	4.17	0.25
Xylene	4.35	0.17

Title V Program Applicability Basis

This facility has the potential to emit 1,085.46 tons per year of Carbon Monoxide; 2,495.81 tons per year of Nitrogen Oxides; 567.77 tons per year of Volatile Organic Compounds; 51.05 tons per year of Formaldehyde; and 85.08 tons per year of aggregate Hazardous Air Pollutants. Due to this facility's

potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Dominion Tranmission's Lightburn Station is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Opacity Requirements for boilers
	45CSR6	Open burning prohibited.
	45CSR10	Sulfur requirements for fuel burned
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources
	45CSR14	Prevention of significant deterioration
	45CSR16	Standard of Performance for new Stationary Sources
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR 34	Emission Standards for Hazardous Air Pollutants Pursuant to 40 C.F.R. Part 63
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
	40 C.F.R. 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
	40 C.F.R. 60 Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
	40 C.F.R. 60 Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
	40 C.F.R. 60 Subpart JJJJ	NSPS for Stationary Spark Ignition IC Engines
	40 CFR Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. 63 Subpart HHH	Natural Gas Transmission and Storage Facilities MACT
	40 C.F.R. 63 Subpart DDDDD	Boiler MACT
	40 C.F.R. §63.11(b)	Flare MACT

	40 C.F.R. §60.18	General control device and work practice requirements.
State Only:	45CSR4	No objectionable odors.
	45CSR17	Control fugitive particulate matter

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2823A	May 2, 2011	NA
R14-0009E	January 7, 2009	NA

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

Condition 3.5.10 – According to Director's directive, 45CSR42 (Greenhouse gas Emissions Rule) requirements are deleted.

Condition 11.3.1- Since the initial method 22 was conducted on 4/12/2012, this condition has been updated to require ongoing monthly visual emission checks.

The Regenerator Heater (010-01) was never installed. It has been removed from the Emission Units Table in Section 1.1 of the Title V permit and its applicable requirements have been removed from Section 8.0. As a result, subsequent sections of the Title V permit have been renumbered.

Lightburn Compressor Station and Lightburn Extraction Plant are two separate facilities for determining major source status under NESHAPs because one is transmission/storage and one is production/gathering. Lightburn Compressor Station's potential emissions are such that it is a major source of HAPs, while Lightburn Extraction Plant's potential emissions are a minor source of HAPs.

The two dehydration units and flares at Lightburn Compressor Station (Unit IDs: 004-01, 004-02, 0001, and 0002) are subject to 40 C.F.R. 63 Subpart HHH as they are at a transmission and storage facility at a major source of HAPs. Unit ID 011-01 (FLARE3) is an emergency process flare at Lightburn Extraction Plant, which is a production/gathering facility at an area source, and would base its applicability to 40 C.F.R. 63 Subpart HH. Subpart HH for area sources only affects triethylene glycol dehydration units (40 C.F.R. §63.760(b)(2)) of which there are none at Lightburn Extraction Plant.

Emission Unit ID 002-02 is an existing spark ignitition emergency stationary engine with a site rating of greater than 500HP located at a major source of HAPs. This engine is subject to 40 CFR§63.6640 (f)(2) and the requirements have been added as condition 3.1.15 to this permit.

Emission Unit IDs 006-01, 006-02, 007-01, 007-02 and 012-01 are new Stationary Rice located at an area source of HAPs. For a new stationary Rice located at an area source, 40 C.F.R.§§ 63.6590(c) and (c) (1) state that the engines must meet the requirements of 40 C.F.R. 63, Subpart ZZZZ by meeting the requirements of 40 C.F.R 60 Subpart IIII for compression ignition engines(007-01and 007-02) or 40 C.F.R.60 Subpart JJJJ for spark ignition engines(006-01, 006-02 and 012-01). No further requirements apply for the engines under 40 C.F.R 63 Subpart ZZZZ.

40 C.F.R. 63, Subpart DDDDD (Boiler MACT) Requirements for Natural Gas Boiler [ID No. 005-01]. On February 21, 2011, EPA signed the final rule for the Boiler MACT. This rule was published in the Federal Register on March 21, 2011 which established the existing source compliance date as March 21, 2014 (the new source compliance date was May 20, 2011). Boiler [ID No. 005-01] is natural gas-fired with a maximum design heat input of 10.461 MMBtu/hr. The 40 C.F.R. 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters," placeholder language was included as Condition 4.5.1.

On May 18, 2011 EPA published a Federal Register final rule (76 FR 28662-28664) staying 40 CFR 63, Subpart DDDDD in its entirety along with an indefinite delay of its effective date. However, on January 9, 2012 the US District Court for the District of Columbia declared unlawful EPA's May 18, 2011 stay and delay of the major source Boiler MACT (40 CFR 63, Subpart DDDDD) and new portions of CISWI (40 CFR 60, Subparts CCCC and DDDD). However, EPA has plans to finalize its reconsidered versions of these rules by Spring 2012, and replace these newly reinstated rules, including re-setting of reporting and compliance timelines. In a January 18, 2012 letter to Senator Wyden of Oregon, EPA Administrator Jackson stated that using its enforcement discretion, EPA does not intend for the recent court decision to impact new or existing sources in the interim before the new rules are promulgated.

Non-Applicability Determinations

40 C.F.R. Part 60 Subpart Kb - ***Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*.** 40 C.F.R. §60.110b(d)(2) states that this subpart does not apply to pressure vessels designed to operate in excess of 204.9 kPa (29.7 psi) and without emissions to the atmosphere. The Horizontal Natural Gas Liquid Storage Tanks at the Lightburn Extraction Plant (Em. Unit IDs: 008-01, 008-02, 008-03, 008-04) will be operated at 225 psi and do not vent to atmosphere since their emissions are controlled by FLARE3. Since these tanks do not meet the applicability criteria they are not subject to this rule. The Diesel Fuel Storage Tanks and Methanol Storage Tank (Em. Unit IDs: 014-01, 014-02, 014-03) are all of design capacity less than 75 cubic meters. Since these tanks do not meet the applicability criteria of §60.110b(a), they are not subject to this rule.

40 C.F.R. Part 60 Subpart LLL – *Standards of Performance for Onshore Natural Gas Processing: SO_2 Emissions.* According to 40 C.F.R. §60.640(a), this rule applies to the following affected facilities: each sweetening unit, and each sweetening unit followed by a sulfur recovery unit. There are no sweetening units at the Lightburn Extraction Plant (LEP). The remaining applicability criteria §§60.640(b) through (e) all apply to affected facilities (i.e., sweetening units). Since there are no sweetening units, none of these criteria make the rule applicable. Since the facility does not meet the applicability criteria, this rule does not apply to the Lightburn Extraction Plant (LEP).

40 C.F.R. Part 63 Subpart HH – *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities*. Under the definition of "Facility" in 40 C.F.R. §63.761 and in accordance with U.S. EPA Applicability Determination Index (ADI) # M050022, HAP emissions from the Lightburn Extraction Plant (LEP) are not to be aggregated with the Lightburn Compressor Station (LCS) to determine HAP status (major/minor) under Subpart HH. Based upon the potential HAP emissions for the LEP, the LEP is an area source of HAPs. According to 40 C.F.R. §63.760(b)(2), the affected source for area sources includes each triethylene glycol

(TEG) dehydration unit, of which there are none at LEP. In accordance with 40 C.F.R. §63.760(d), if there are no affected sources at the facility, then the facility is not subject to Subpart HH.

40 C.F.R. Part 63 Subpart EEEE - ***National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)***. The Lightburn Extraction Plant (LEP) is a natural gas production facility, as the term "facility" is defined in §63.761 of 40 C.F.R. 63 Subpart HH; and the Lightburn Compressor Station (LCS) is a natural gas transmission and storage facility, as the term "facility" is defined in §63.1271 of 40 C.F.R 63 Subpart HHH. Therefore, Lightburn Station is not subject to Subpart EEEE since it meets the criteria of 40 C.F.R. §§63.2334(c)(1) and (2).

40 C.F.R. Part 64 – *Compliance Assurance Monitoring* (CAM). The table below sets forth the non-applicability determinations for multiple emission units integral to the proposed Lightburn Station.

Em. Unit ID	Pollutant	Rationale
001-01 through 001-07, 002-02, 005-01, 005-02, 005-03, 005-04, 005-05	Various	These Emission Units do not have any control; Therefore, in accordance with 40 C.F.R § 64.2(a)(2), CAM is not applicable to these emission units.
004-01, 004-02	VOC, HAPs	These Emission Units have flares to control VOC and HAPs, but the only limitations for these come from 40 C.F.R 63 Subpart HHH which is exempt from CAM per §64.2(b)(1)(i).
006-01, 006-02	CO, VOC	For each of the **Caterpillar G3612 engines** (Em. Unit IDs: 006-01, 006-02) uncontrolled potential emissions of CO and VOC are 94.18 tpy and 22.26 tpy, respectively. These pre-control device PTEs are less than the major source threshold of 100 tpy. Since the applicability criterion at 40 C.F.R. §64.2(a)(3) is not met, CAM does not apply to the engines on a pollutant-specific basis for pollutants CO and VOC.
	NOx	A control device is not employed to control NOx emissions from the **Caterpillar G3612 engines** (Em. Unit IDs: 006-01, 006-02). According to the manufacturer's data supplied in Attachment M of the application, NOx emissions are unaffected by the oxidation catalyst employed to reduce CO and VOC emissions. The applicability criterion at 40 C.F.R. §64.2(a)(2) is not met, and thus CAM does not apply on a pollutant-specific basis for NOx emitted from the engines. Furthermore, potential NOx emissions from each engine are 17.124 tpy, which is less than the major source threshold. Thus, even if a NOx control device were used, the engines would still not meet applicability criterion at 40 C.F.R. §64.2(a)(3) for NOx.
	HCHO	The **Caterpillar G3612 engines** (Em. Unit IDs: 006-01, 006-02) are subject to an emission limitation for formaldehyde, which meets applicability criterion §64.2(a)(1). An oxidation catalyst controls formaldehyde emissions to meet the limitation, which meets applicability criterion §64.2(a)(2). According to the application, the uncontrolled potential emissions of formaldehyde from each of the Caterpillar G3612 engines are 13.70 tpy, which exceeds the major source threshold of 10 tpy of a single HAP. Thus all applicability criteria §§64.2(a)(1) through (3) are met. However, emissions of formaldehyde from the engines are subject to 40 C.F.R. 63 Subpart ZZZZ. Therefore, the criterion at §64.2(b)(1)(i) for an exemption is met and CAM does not apply to the Caterpillar G3612 engines (Em. Unit IDs: 006-01, 006-02) for formaldehyde.

Em. Unit ID	Pollutant	Rationale
007-01, 007-02	Various	The **John Deere Co. Fire Pump engines** (Em. Unit IDs: 007-01, 007-02) are subject to emission limitations for various pollutants; however no air pollution control device is employed to achieve compliance with such limitations. Therefore, CAM does not apply to these engines since they do not meet the applicability criterion at 40 C.F.R. §64.2(a)(2).
008-01, 008-02, 008-03, 008-04	VOC	The **Horizontal Natural Gas Liquids Storage Tanks** (Em. Unit IDs: 008-01, 008-02, 008-03, 008-04) are subject to an emission limitation or standard. The standard is the maximum throughput limitation of permit R13-2823, 7.1.1. This is determined since part of the definition of *Emission limitation or standard* at §64.1 is that "An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement." The throughput limitation is considered an operational standard; therefore, the applicability criterion at §64.2(a)(1) is met. The tanks are pressurized vessels under normal operations, and the tanks are only vented to control device FLARE3 during emergency situations or non-routine maintenance activities. Thus, the control device is not employed during normal operations. More importantly, the FLARE3 is not employed to achieve compliance with the throughput limitation. Therefore, applicability criterion §64.2(a)(2) is not met and CAM does not apply to the tanks.
FLARE3	Various	The **Emergency and Maintenance Flare** (Control Device ID: FLARE3) controls VOC emissions from (i) absorber draining; and (ii) emergency episodes of venting the Horizontal Natural Gas Liquids Storage Tanks. The flare pilot runs continuously through all times. None of the PTEs of any pollutant emitted from the flare exceed the major source threshold. Therefore, applicability criterion §64.2(a)(3) is not met and CAM does not apply to the FLARE3.
AUX-03	Various	The Emergency Generator (012-01) is subject to the emission standards of 40 C.F.R. 63 Subpart JJJJ which are exempt from CAM per 40 C.F.R § 64.2 (b) (1)(i)

45CSR10 – *To Prevent and Control Air Pollution from the Emission of Sulfur Oxides*.
Internal Combustion Engines (Em. Unit IDs: 001-01 through 001-07, 002-02, 006-01, 006-02, 007-01, 007-02)
All limits and standards of 45CSR§10-3 apply to fuel burning units. None of the compressor engines (*001-01 through 001-07*, 006-01, 006-02), Auxiliary Generator (*002-02*) and fire pump engines (007-01, 007-02) are a "Fuel burning unit" as defined in 45CSR§10-2.8. Therefore, none of the engines are subject to 45CSR§10-3 limits or standards. Similarly, all limits and standards of 45CSR§10-4 apply to manufacturing process source operations. None of the engines are a "manufacturing process" "source operation" according to the definitions in 45CSR§§10-2.11. and 2.19. Therefore, none of the engines are subject to 45CSR§10-4 limits or standards. As a final point, internal combustion engines, including gas turbines and emergency generators, are not subject to 45CSR10 according to the Director's verbal guidance.

Emission Unit IDs- BLR02, HTR01, RBR01, RBR02 are less than 10 MMBtu/hr, and are exempt from the requirements of 45CSR§10-3 and 45CSR§§10-6 through 8 in accordance with the exemption granted under 45CSR§10-10.1.

Condition 11.3.1.b. of Permit R13-2823. This underlying condition applies to the compressor engines 006-01 and 006-02, and the fire pump engines 007-01 and 007-02. The condition states, "For the purpose of determining compliance with the Regulated Pollutant Limitation for SO2, a person designated by a Responsible Official or Authorized Representative shall maintain records of the maximum sulfur content on a per-shipment basis for fuel oil, recycled or used oil or annual certification of the sulfur content from the supplier for pipeline quality natural gas." These engines are not subject to an SO_2 emission limitation. Therefore, this underlying recordkeeping is unnecessary for Title V permitting purposes.

40 CFR 63 Subpart ZZZZ - Emission Unit IDs 001-01 through 001-07 are spark ignited non-emergency, 2 stroke lean burn engines. They are existing stationary engines with a site rating of greater than 500HP located at a major source of HAPs. These Engines are not subject to any requirements for 40 CFR 63 Subpart ZZZZ, per 40 C.F.R § 63.6590(b)(3)(i).

Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.
The facility has not submitted any application for a PSD modification; therefore, the requirements of the GHG tailoring rule are non-applicable.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	June 6, 2012
Ending Date:	July 6, 2012

All written comments should be addressed to the following individual and office:

Beena Modi
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Beena Modi
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1228 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not applicable.